

Begin

Reel #257
Kvriahnykh, L.P.

GORELYSHEV, N.V., kand.tekhn.nauk; LYUBIMOVA, T.Yu., kand.khim.nauk;
KOLBANOVSKAYA, A.S., kand.khim.nauk; IVANOV, P.M., kand.tekhn.
nauk; KELLER, I.M., kand.tekhn.nauk; AGAPOVA, R.A., inzh.;
TIMOFEEVA, L.D., inzh.; YAKOVLEVA, A.I., red.; KOVRIZHNYKH,
L.P., red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Physicochemical methods of characterizing the properties and
structure of road and building materials] Fiziko-khimicheskie
metody kharakteristiki svoistv i struktury dorozhno-stroitel'-
nykh materialov. Moskva, Nauchno-tekhn.izd-vo M-va avtomob-
il'nogo transp. i shosseinykh dorog RSFSR, 1961. 91 p.

(MIRA 14:12)

(Road materials---Testing)

(Building materials---Testing)

GUMENSKIY, Boris Mikhaylovich, prof.; NOVOZHILOV, Gennadiy Fedorovich, assistant; KOVRIZHENYKH, L.P., red.; DONSKAYA, G.D., tekhn. red.

[Thixotropy of soil and its calculation in the construction of roads and road bridges] Tiksotropiia gruntov i ee uchast pri stroitel'stve avtomobil'nykh dorog i mostov. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 106 p. (MIRA 15:2)

(Soil mechanics--Research) (Road construction)
(Bridge construction)

RITOV, Maks Nikolayevich; RYBNIKOV, Venidikt Ivanovich; YAKOVLEVA,
A.I., red.; KOVRIZHNYKH, L.P., red.; DONSKAYA, G.D., tekhn. red.

[Organization of the flow of operations in road construction]
Organizatsiia potoka pri stroitel'stve avtomobil'noi dorogi.
Moskva, Avtotransizdat, 1961. 114 p. (MIRA 15:5)
(Road construction)

KNYAZYUK, Konstantin Andreyevich, kand. tekhn. nauk; KOVRYZHNYKH ^L M.P.,
red.; DONSKAYA, G.D., tekhn. red.

[Use of dirt in the construction of road pavements and subgrades]
Primenenie gruntov v stroitel'stve dorozhnykh pokrytii i osno-
vani. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo tran-
sporta i shosseinykh dorog RSFSR, 1961. 90 p. (MIRA 15:2)
(Road construction)

BIRULYA, Aleksandr Konstantinovich, prof.; GOVORUSHCHENKO, Nikolay Yakovlevich, dots., kand. tekhn. nauk; YERMAKOVICH, Dmitriy Vladimirovich, dots., kand. tekhn. nauk; YAKOVLEVA, A.I., red.; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Highways and their use] Ekspluatatsionnye kachestva avtomobil'nykh dorog. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 133 p. (MIRA 15:2)
(Transportation, Automotive) (Roads)

IGOILKIN, Nikolay Ivanovich; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA, Ye.N.,
tekhn. red.

[Roughing road surfaces] Ustroistvo sberokhovatoi poverkhnosti
dorozhnykh pokrytii. Moskva, Avtotransizdat, 1962. 28 p.
(Road construction) (MIRA 15:7)

IVANOV, N.N., prof., doktor tekhn.nauk; BARZDO, V.I., dotsent;
YAKOVLEV, Yu.M., aspirant; OSADCHAYA, L.M., inzh.
KOVRIZHNYKH, L.P., red.; DONSKAYA, G.D., tekhn.red.

[New methods of designing and testing flexible road pavements]
Novye metody rascheta i ispytaniia dorozhnykh odezhd nezhestkogo
tipa. Pod obshchei red. N.N.Ivanova. Moskva, Avtotransizdat,
1962. 37 p. (MIRA 15:4)

1. Moscow. Avtomobil'no-dorozhnyi institut. 2. Zaveduyushchiy
kafedroy stroitel'stva i ekspluatatsii dorog Moskovskogo avto-
mobil'no-dorozhnogo instituta (for Ivanov).
(Pavements)

DENISOV, Boris Ivanovich; KOVRIZHNYKH, L.P., red.; BOGDANOVA, A.P.,
tekhn. red.

[Handbook for the operator of a concrete mixer] Pamiatka mashini-
stu betonomeshalok. Moskva, Avtotransizdat, 1962. 47 p.
(MIRA 15:6)

(Concrete mixers)

KOLKER, Iosif Yakovlevich; KOVRIZHNYKH, L.P., red.; DONSKAYA, G.D.,
tekhn. red.

[Obtaining and treating stone materials for road construction] Dobycha i pererabotka kamennykh dorozhno-stroitel'nykh materialov.
Moskva, Avtotransizdat, 1962. 291 p. (NIRA 15:5)
(Road materials) (Quarries and quarrying)

BUKHAYEV, V.P., inzh.; GEL'FAND, S.I., inzh.; DIDERIKHS, F.F.; KALERT, A.A., doktor tekhn. nauk, prof.; NIKISHINA, M.F., kand. tekhn. nauk; TSENYUGA, N.S., inzh.; KOVRIZHNYKH, L.P., red.; BODANOVA, A.P., tekhn. red.

[Study of lightweight improved road pavements of the northwestern part of the U.S.S.R.] Issledovanie oblegchennykh usovershenstvovannykh pokrytii avtomobil'nykh dorog severo-zapadnoi chasti SSSR. [By] V.P. Bukhaev i dr. Pod red. A.A. Kalerta. Moskva, Avtotransizdat, 1962. 124 p. (MIRA 16:1)
(Russia, Northwestern--Pavements)

ANDREYEV, Oleg Vladimirovich, kand. tekhn. nauk, dots.; ARTEM'YEV, Sergey Sergeyevich, inzh.; BOLDAKOV, Yevgeniy Vasil'yevich, doktor tekhn. nauk, prof.; ZHURAVLEV, Mark Mikhaylovich, kand. tekhn. nauk; TEN, Igor' Aleksandrovich, kand. tekhn. nauk; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Calculation of the openings of engineering structures according to limiting states] Raschet otverstii iskusstvennykh sooruzhenii po predel'nykh sostoianiiam. [By] O.V. Andreev i dr. Moskva, Avtotransizdat, 1963. 106 p.

(MIRA 16:4)

(Bridges) (Floods)

KEROGLU, Lidiya Aleksandrovna; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA,
Ye.N., tekhn. red.

[Study of the traffic capacity of automobile roads] Issledovanie propusknoi sposobnosti avtomobil'nykh dorog. Moskva, Avtotransizdat, 1963. 60 p. (MIRA 17:2)

BABKOV, Valeriy Fedorovich, prof.; ORNATSKIY, Nikolay Vasil'yevich, prof.; MASLOV, Nikolay Nikolayevich, prof.; IVANOV, Nikolay Nikolayevich; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Problems of road construction at the 5th International Conference on Soil Mechanics and Foundation Engineering, Paris, 1961] Voprosy dorozhnogo stroitel'stva na V Mezhdunarodnom kongresse po mekhanike gruntov i fundamentostroeniiu, Parizh, 1961. [By] V.F.Babkov i dr. Moskva, Avtotransizdat, 1963. 200 p. (MIRA 17:4)

KOVRIZHNYKH. M.

Customs Administration - China

Customs administration of the Chinese People's Republic. Vnesh. torg. 22, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

KOVRIZHNYKH, M

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Vneshnyaya trgovlya stran narodnoy demokratii (Foreign trade for the
countries of people's democracy, ed. by) M. F. Kovrizhnykh i A. B. Frunain.
Moskva, Vneshtorigzdat, 1955.
319 p. tables.

KOVRIZHNYKH, M.

"International trade agreements and organizations" by R. Bystritskii.
Reviewed by M. Kovrizhnykh. Vnesh. terg. 28 no.9:45-47 '58.

(MIRA 11:10)

(International Economic Relations)

KOVRIZHNYKH, M.F., dotsent, red.; STEPANOV, S.M., kand.ekonom.nauk, red.;
~~YERMACHKOVA~~, G.S., red.izd-va; PAVLOVSKIY, A.A., tekhn.red.

[The export trade of people's democracies] Vneshniaia trgovlia
stran narodnoi demokratii. Pod red. M.F.Kovrizhnykh, S.M.
Stepanova. Moskva, Vneshtorgizdat, 1961. 286 p.

(MIRA 14:6)

1. Moscow. Vsesoyuznaya akademiya vneshney trgovli.
(Communist countries--Commerce)

KOVRIZHNYKH, O. M.

USSR/Electronics - Electrical effects

Card 1/1 Pub. 86 - 12/36

Authors : Kovriahnykh, O. M., and Kuchayev, V. L.

Title : Radioactive sources of high voltage

Periodical : Priroda 44/6, 86 - 89, Jun 1955

Abstract : An apparatus is described which consists basically of two plates, one grounded and the other ideally insulated and coated with a radioactive substance, the whole being placed in a vacuum. The principle on which a potential difference is developed is explained, such difference amounting in a given instance to 6,600 volts. Figures of quantities involved are stated. Five English-language references (1913-1953). Drawings; graphs.

Institution :

Submitted :

21(7)

AUTHORS:

Glagolev, V. L., Kovrizhnykh, O. M., Makarov, Yu. V.,
Yampol'skiy, P. A. SOV/56-36-4-13/70

TITLE:

Isomers With Millisecond Periods Formed in Reactions With
Neutrons With Energies of 14 Mev (Izomery s millisekundnymi
periodami, vznikayushchiye pri reaktsiyakh s neytronami s
energiyey 14 Mev)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 4, pp 1046-1057 (USSR)

ABSTRACT:

In the present paper the authors report on an investigation
of the short-lived (10^{-3} - 10^{-1} sec) γ -radiation occurring in
reactions with the participation of 14 Mev neutrons. Investi-
gations were carried out of Li, C, Na, Mg, Al, S, Ca, Sc, Ti,
V, Mn, Co, Ni, Zn, Ga, Ge, As, Se, Br, Rb, Cu, Fe, Sr, Y, Zr,
Nb, Mo, Pd, Cd, In, Sn, Te, La, Ce, Ta, W, Au, Hg, Tl, Pb, Bi,
Th, and U. In Mg, Al, Ge, As, Y, In, Pb, and Bi γ -activities
of such small half-lives were found. The apparatus and the
measuring method are first described in detail. The neutrons
used originated from the reaction $T(d,n)He^4$ and were accelerated

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Isomers With Millisecond Periods Formed in Reactions With Neutrons With
Energies of 14 Mev

SOV/56-36-4-13/70

in an accelerator of 500 kv (of Ref 6). Irradiation was in pulses at the rate of ~ 1 pulse per second. The square pulses received on the target had a duration of 1.3 msec and amplitudes of up to 2 ma; $2 \cdot 10^7$ neutrons/pulse were emitted. The neutron monitor worked with a photomultiplier FEU-19M with scintillator which was sensitized for neutrons (ZnS in plexiglass), and with the PS-10000 device "Flocks". For measuring γ -radiation a NaJ(Tl)-crystal in a standard duraluminum container with the photomultiplier FEU-S was used. The devices and methods for the determination of the half-lives of isomers and for estimation of the formation cross section for isomers are discussed in detail. Figure 1 shows a block scheme of the entire device, figures 3, 6, 7, 11, 12 show spectra recordings. Measuring results are discussed individually for each element. The most important are contained in the following table:

Sample	γ -energy [Mev]	half-life [msec]	cross section [10^{-24} cm^2]	suggested reaction
Mg	0.47 ± 0.01	20 ± 1	0.08	$\text{Mg}^{24}(\text{n}, \text{p})\text{Na}^{24\text{m}}$
Al	0.47 ± 0.01	20 ± 1	0.04	$\text{Al}^{27}(\text{n}, \alpha)\text{Na}^{24\text{m}}$

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Energies of 14 Mev

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Sample	γ -energy [Mev]	half-life [msec]	cross section [10^{-24} cm^2]	suggested reaction
Ge	0.17 ± 0.01	16 ± 1	0.3	-
As	0.28 ± 0.01	17 ± 1	0.13	$\text{As}^{75}(n, n')\text{As}^{75m}$
Y	0.24 ± 0.01	14 ± 1	-	$\text{Y}^{89}(n, n')\text{Y}^{89m}$ or $\text{Y}^{89}(n, 2n)\text{Y}^{88m}$
In	0.32 ± 0.01	42 ± 2	0.8	$\text{In}^{115}(n, 2n)\text{In}^{114m}$
Pb	0.48 ± 0.01 ; 0.94 ± 0.02	5 ± 0.5	-	$\text{Pb}^{206}(n, 2n)\text{Pb}^{205m}$
	0.58 ± 0.01 ; 1.04 ± 0.03	$8 \cdot 10^2 \pm 1.5 \cdot 10^2$	1.5	$\text{Pb}^{208}(n, 2n)\text{Pb}^{207m}$
Bi	0.48 ± 0.01 ; 0.86 ± 0.02	2.7 ± 0.3	0.6	$\text{Pb}^{207}(n, n')\text{Pb}^{207m}$ $\text{Bi}^{209}(n, 2n)\text{Bi}^{208m}$

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The authors finally thank O. I. Leypunskiy for his great help,
and O. B. Likin, N. M. Meleshin, N. K. Parshenkov, V. A. Sha-

Isomers With Millisecond Periods Formed in Reactions With Neutrons With
Energies of 14 Mev

SOV/56-36-4-13/70

bashov, Yu. Ya. Lapitskiy, A. V. Gusev, V. S. Ionov, and
D. F. Veprintsev for their collaboration. There are 12 figures,
1 table, and 21 references, 10 of which are Soviet.

SUBMITTED:

October 21, 1958

Card 4/4

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6.3200
5.5800

86744

S/120/60/000/006/019/045
EO32/E314

AUTHORS: Kovrizhnykh, O.M., Likin, O.B. and
Yampol'skiy, P.A.

TITLE: A Study of Commercially Available Photomultipliers
Operated under Forced Conditions

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, No. 6,
pp. 69 - 72

TEXT: The aim of the present work was to investigate the possibility of using commercially available photomultipliers (of Soviet manufacture) in the measurement of high-intensity light pulses 10^{-5} - 10^{-4} sec long without amplification. Photomultipliers were chosen whose nominal ratings indicated that they were capable of withstanding increased applied HT's and relatively large currents. The particular photomultipliers investigated were ФЭУ-33 (FEU-33), ФЭУ-11 (FEU-11) and ФЭУ-12 (FEU-12), all of which were described by Vil'dgrube and Berkovskiy (Refs. 1, 2). The photomultipliers were investigated using the circuit shown in Fig. 1. The signal amplitude across the load of the photomultipliers was

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X

A Study of Commercially Available Photomultipliers Operated under Forced Conditions

measured with the aid of oscillographs (type MO-4 (IO-4) or 15-M (25-I)). The neon lamp MH-8 (MN-8) was used as the source of light. It was capable of producing light flashes 0.3 and 3-10 μ s long with a repetition frequency of 50 to 200 cps. The intensity of the flashes was measured using calibrated neutral filters. In some of the experiments the instrument designated as C Φ P (SFR) (Shnirman et al, Ref. 4) was employed. In this way, light pulses 4 - 70 μ s long were produced with a repetition frequency of 1300 - 75 cps. In the case of the FEU-33 photomultiplier it was found that HT's of less than 4 000 V were necessary if breakdowns were not to take place. It was also found that the maximum current which could be safely drawn was about 400 mA. The maximum output current (through a 150 Ω load resistor) was obtained by distributing the potential differences between the dynodes so that the potential differences between the first ~~even~~

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E032/E314

A Study of Commercially Available Photomultipliers Operated
under Forced Conditions

dynodes were greater than the potential differences between the last four electrodes, and also by reducing the voltage on the last dynode. During the tests on the FEU-33 photomultipliers an ageing effect was found to be present, i.e. the amplitude of the output pulse across the load of the photomultiplier decreased with time and tended to a certain limiting value for a given intensity repetition frequency and duration of light pulses. It was established that this limiting value decreases with increasing intensity, repetition frequency and duration of the light flashes. After a period of "rest", the amplitude of the output pulse increases and the sensitivity of the photomultiplier is restored to the original value after a certain period of time. Two types of ageing were found, namely, a slow ageing effect which gradually becomes more pronounced with the number of light flashes incident on the photomultiplier cathode, leading to a reduction in the amplitude of the output pulse, towards its end.

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A Study of Commercially Available Photomultipliers Operated under Forced Conditions

The second type of ageing is a "fast" effect leading to a reduction in the amplitude of the pulse amplitude towards its end and re-establishment of this amplitude at the beginning of the next flash. The FEU-12 photomultipliers were investigated under similar conditions. The maximum output amplitude was obtained with a total HT across the tubes of 2 800 V, the voltage distribution along the dynodes being as follows: $U_1 = 224 \text{ V}$; $U_2 = 176 \text{ V}$; $U_3 = 176 \text{ V}$; ... $U_8 = 176 \text{ V}$; $U_9 = 210 \text{ V}$; $U_{10} = 325 \text{ V}$; $U_{11} = 225 \text{ V}$ and $U_{12} = 340 \text{ V}$. The maximum current corresponding to the linear part of the output voltage-intensity curve was 400 mA. The ageing effect was not present in these multipliers. For this reason, the FEU-11 and FEU-12 photomultipliers can be used to study both single and periodic light flashes, having durations up to 10^{-5} sec. The maximum current obtained from

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under Forced Conditions

these photomultipliers was about 700 mA but this value no longer lies on the linear part of the curve. The maximum currents corresponding to the linear part of the output voltage versus intensity curve are as follows: FEU-53 200 mA, FEU-11 and FEU-12 400 mA, the slope of the straight lines being independent of the duration of the pulses. Acknowledgments are expressed to N.K. Parshenkov for assistance in the work.

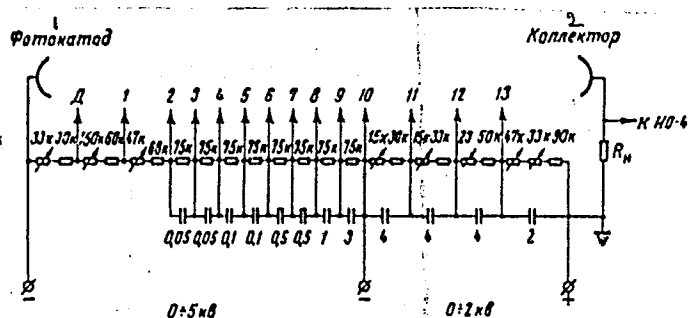
Card 5/6

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E032/E314

A Study of Commercially Available Photomultipliers Operated under Forced Conditions



There are 7 figures and 4 Soviet references.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR
(Institute of Chemical Physics of the AS USSR)

SUBMITTED: October 6, 1959
Card 6/6

LIKIN, O.B.; KOVRIZHNYKH, O.M.

"Gray wedge" time analyzer. Prib. i tekhn. eksp. 6 no.2:91-94
Mr-Apr '61. (MIRA 14:9)

1. Institut khimicheskoy fiziki AN SSSR.
(Pulse techniques (Electronics))

ACC NR: AP7000518 SOURCE CODE: UR/0048/66/030/011/1760/1762

AUTHOR: Grigorov, N. G.; Kovrizhnykh, O. M.; Nesterov, V. Ye.;
Rapoport, I. D.; Savenko, I. A.; Skuridin, G. A.; Titenkov, A. F.

ORG: none

TITLE: Measurement of the energy spectrum of primary cosmic rays with
energies in the region of 10^{10} — 10^{14} ev using the Proton-1 satellite
[Paper presented at All-Union Conference on Physics of Cosmic Rays held in Moscow from 15 to 20 November 1965]
SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 11,
1966, 1760-1762.

TOPIC TAGS: cosmic radiation energy, cosmic radiation, cosmic ray
measurement, artificial earth satellite, *primary cosmic ray, meteorologic
satellite, particle spectrum*

ABSTRACT: The energy spectrum of primary cosmic rays with energies
between 10^{10} and 10^{14} ev was measured using equipment mounted on the
Proton-1 satellite. The ionization calorimeter method of measurement was
employed using SEZ-14 equipment. Spectra of protons with energies
between 5×10^9 — 10^{12} ev and of all particles (protons and heavier
particles) with energies between 2×10^{10} — 10^{14} ev were measured,
although the charge of particles with energies between $2 \cdot 10^{10}$ and
 10^{14} ev was not determined. The energy spectrum (see Fig. 1) obtained
from data taken during a 36-hour period for protons and a 50-hour

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1-10805-65 BWT(m)/BPR/BWP(m)/BWP(b) > Pr-4/Pa-4 ASD(m)-3 JD/BW
 ACCESSION NR: AT4014710 S/2981/63/000/002/0031/0040

AUTHOR: Kovrizhnykh, V. G.; Panagaybo, Yu. N.; Sverlov, V. I.

TITLE: Technology of extruding large, flat or round, SAP bars

SOURCE: Alyuminyevyye splavy*. Sbornik statay, no. 2. Spichennyye splavy*. Moscow, 1963, 31-40

TOPIC TAGS: aluminum, intermetallic aluminum powder, SAP, extrusion, SAP alloys, alloy extrusion, extruded SAP, SAP property 14 1 1.7

ABSTRACT: The authors describe a new process for the extrusion of flat or round SAP bars by hot briquetting. Although existing machinery can be used, the extrusion conditions differ somewhat from those used for conventional aluminum alloys. Thus, the SAP billets should have a temperature of 520--550C, the container should be preheated to 430--450C, the pressure should be increased rather rapidly and the extrusion rate should be maintained between 4-6 and 10 meters/minute, since lower rates lead to the formation of hot transverse cracks while higher rates favor the formation of cold longitudinal cracks. Lubrication has a very beneficial effect. Extrusion rates above 10 m/min. also promote blistering, apparently because of the

formation of cold longitudinal cracks. Lubrication has a very beneficial effect. Extrusion rates above 10 m/min, also promote blistering, apparently because of the resultant rise in temperature. The mechanical properties of SAP bars extruded under the proper conditions show no significant anisotropy and are not affected

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interval for all other particles is given. It is noted that the cited results are preliminary, since they are obtained from a small part of

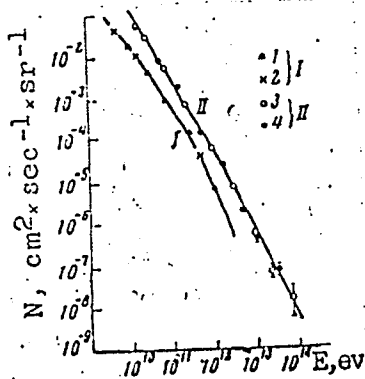


Fig. 1. Energy spectra of primary protons (I) and all other particles (II)

1, 3 - First half of the equipment; 2, 4 - second half of the equipment.

the obtained data. Orig. art. has: 2 figures.

[WA-75]
[IV]

SUB CODE: 04, 20/
OTH REF: 003

SUBM DATE: none/

ORIG REF: 005/

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ACCESSION NR: AT4012710

by annealing at 500C for as long as 100 hrs. or even by being held at 500C under a stress equal to half the yield point for up to 580 hours. The surface of etched samples was studded with inclusions, up to 1 mm in diameter, which gave a positive Fe test and could be traced to metal bits from the grinding balls and lining of the ball mill. The microstructure showed no grains, only alumina particles uniformly distributed throughout the aluminum matrix. This method was used in the pilot production of round bars 45-170 mm in diameter and flat bars up to 30 mm thick and 405 mm wide, extruded from round SAP billets 135-500 mm in diameter and 150-400 mm long.

PRODUCTION OF BILLET 12-17 mm in diameter and 135-500 mm in length, 405 mm thick and 405 mm wide, extruded from round SAP billets 135-500 mm in diameter and 250-900 mm long with reductions of 88-94%. "Engineers V. M. Baranchikov, V. A. Tikhonov, G. F. Gulakov, O. I. Al'bert, Ye. S. Volkov, B. I. Pasyankov, N. V. Kopytova, and Ye. R. Romanova took part in the work, along with technologist Z. A. Pavlanko." Original, has 2 tables and 7 illustrations.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Cerd 2/2

ACCESSION NR: AT4037654

S/2981/64/000/003/0136/0144

AUTHOR: Khol'nova, V. I.; Kovrizhny*kh, V. G.; Yelagina, Z. A.

TITLE: A study of large stampings from alloy V93

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 136-144

TOPIC TAGS: aluminum alloy, alloy V93, alloy stamping, alloy heat treatment, alloy mechanical property, alloy corrosion resistance

ABSTRACT: The report concerns the effects of production technology on the properties of large pieces (300 x 460 x 1026 mm) stamped at 350-430°C from ingots of alloy V93 (6.92-7.22% Zn, 1.93-2.06% Mg, about 1.0% Cu, 0.23-0.34% Fe, 0.12-0.15% Si, traces of Mn and Cr). The ingots were homogenized 36 hours at 445-465C and stamping followed forging at 350-420C (after preheating to 380-420C). Tests indicate tensile strength averaging 50.3-54.5 kg/mm² in three directions, yield 48.8-53.5 kg/mm², elongation 3.3-7.8% — depending on direction and area of stamping. Samples were quenched in hot water (75-85C) from 470C and aged 3 hours at 120C, then 4 hours at 165C. Tensile strength is not reduced by quenching in hot water; however, elongation deteriorates if the water temperature exceeds

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ACCESSION NR: AT4037654

85C. Corrosion tests were satisfactory, results approximating those for alloy V95. Warping was well within tolerance limits and it is concluded that parts can be heat treated after final mechanical operations by providing 2-3 mm machining allowances for special fits. "N. D. Vinokurov, F. F. Andrianov, I. Ya. Zal'tsman, Ye. S. Volkov, M. A. Vasilevskaya, N. K. Komarova and V. A. Klimova also took part in the work." Orig. art. has: 4 tables and 7 graphs.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 04Jun64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AT4037668

S/2981/64/000/003/0271/0284

AUTHOR: Loktionova, N. A.; Rastvorova, N. M.; Kovrizhny*kh, V. G.; Komarova, N. K.;
Telis, M. Ya.

TITLE: Ways to reduce warping of large parts made of alloy AK4-1

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable
alloys), 271-284

TOPIC TAGS: alloy AK4-1, extruded hollow cylinder, hollow cylinder warping, cooling stress,
warping, alloy heat treatment, boiling water quenching, alloy mechanical property, aluminum
alloy

ABSTRACT: The authors report on a study designed to eliminate residual cooling stresses,
which result in a rejection rate of up to 50% due to warping in machining. Inversely extruded
and pierced hollow cylinders (wall thickness 32.5-50.5 mm, outside diameter 591-855 mm,
height 156-823 mm, weight 37 to 180 kg), manufactured in serial production from homogenized
ingots of alloy AK4-1, were hardened (45 min. in a niter bath at $528 \pm 5^\circ\text{C}$, quenched 2 min.
in lukewarm or 5 min. in boiling water) and aged 10 hrs. at 190°C , then tested to determine
effects of quenching in boiling water on mechanical properties, microstructure and warping.
Effects of aging temperature were evaluated in a separate series, where the latter was varied

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ACCESSION NR: AT4037668

from 180 to 210C. Results are tabulated and indicate that quenching in boiling water permits retention of properties adequate for technical requirements (tensile strength 39.3-41.6 kg/mm², yield 29.3-34.3 kg/mm², elongation 12.0-17.7%), but eliminates warping to a degree obviating the need for straightening procedures. "The work was carried out under the guidance of V. I. Dobatkin; N. G. Vinokurov, Yu. N. Ponagaybo, I. N. Perety*kina, G. F. Bulgakov, V. I. Pyatunia, S. M. Titkov, K. V. Kalmy*kov, D. N. Braslavskiy, S. Ya. Veysman, N. N. Aper'yanova, N. S. Pantyushkova and T. V. Privezentseva also took part in the work." Orig. art. has: 4 tables and 3 graphs.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: MM

DATE ACQ: 04Jun64

NO REF SOV: 003

ENCL: 00

OTHER: 000

Card 2/2

L 46984-66 EWP(m)/EWP(t)/ETI IJP(c) JH/JD
 ACC NR: AT6024912 (A, N)

SOURCE CODE: UR/2981/66/000/004/0037/0048

AUTHOR: Mikhaylov, K. N.; Kovrizhnykh, V. G.; Archakova, Z. N.; Baranchikov, V. M.;
 Sandler, V. S.; Shvets, V. A.

ORG: none

TITLE: Preparation of pressed semifinished products from VAD23 alloy

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy
 (Heat resistant and high-strength alloys), 37-48

TOPIC TAGS: aluminum alloy, metal pressing, solid mechanical property / VAD23 alumi-
 num alloy

ABSTRACT: In order to determine the possible applications of VAD23 alloy, the influ-
 ence of various technological factors on its mechanical properties and structure was
 investigated. The optimum mechanical properties were found to be produced by pressing
 directly from an ingot which had first undergone homogenization. The optimum pressing
 temperature of sections with a flange thickness of 5 mm, 470-490°C, i. e., the temper-
 ature to which the blanks are heated, insures high strength characteristics and a com-
 paratively good plasticity over the entire length of the section. The elongation per
 unit length of the sections is practically independent of the pressing temperature of
 the alloy and of the degree of primary recrystallization. A change in the pressing
 rate in the range of 0.5-5.0 m/min at pressing temperatures of 250-430°C does not af-

Card 1/2

I. 46984-66

ACC NR: AT6024912

fect the plasticity of VAD23 alloy, and increases the strength characteristics slightly. In order to slow down the recrystallization of the structure during heating for quenching of thin sections pressed at 470-490°C, it is necessary to prepare them with an elongation coefficient of no more than 25-30. Orig. art. has: 11 figures and 5 tables.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

L 46983-66 EWP(k)/EWT(m)/T/EWP(w)/EWP(t)/ETI IJP(c) JD/HW
 ACC NR: AT6024914 (A, N) SOURCE CODE: UR/2981/66/000/004/0057/0084

AUTHOR: Archakova, Z. N.; Kovrizhnykh, V. G.; Sandler, V. S.; Shvets, V. A.;
 Lobedeva, N. S.

ORG: none

TITLE: Effect of heating conditions preceding quenching and of the degree of cold deformation after quenching on the mechanical properties and structure of pressed sections of VAD23 alloy

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 57-64

TOPIC TAGS: METAL DEFORMATION, aluminum alloy, metal pressing, metal heat treatment / VAD23 aluminum alloy

ABSTRACT: The relationship between the structure, mechanical properties, and heating conditions prior to the quenching of pressed sections of VAD23 alloy was determined. The temperature of heating for quenching of pressed semifinished products should be maintained between 515 and 525°C. The elongation coefficient during pressing of sections with a flange thickness up to 10 mm should be between 15 and 25. Straightening of the sections after quenching by the extension method with a degree of deformation of 1-4% decreases the strength characteristics of sections of VAD23 alloy by 2-4 kg/mm² without much change in elongation per unit length. High degrees of cold deformation do

Card 1/2

L 46983-66

ACC NR: AT6024914

not lead to a further change in mechanical properties. A second quenching changes the strength properties of pressed sections from +1.7 to -11.6 kg/mm² and the elongation from +0.9 to -4.5%. The negative effect of overquenching is greater the higher the elongation coefficient during pressing and the degree of cold deformation after the first and second quenching. It is concluded that in preparing pressed semifinished products from VAD23 alloy, it is necessary to limit the degree of deformation during straightening by extension after quenching to 3% and to avoid a second quenching. Orig. art. has: 7 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

I 46950-66 EWP(e)/EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HM/HW
ACC NR: AT6024936 (A,N) SOURCE CCDE: UR/2931/66/000/004/0238/0253

AUTHOR: Kovrizhnykh, V. G.; Vorob'yev, A. A.; Ponogaybo, Yu. N.; Tsabrov, N. D.;
Matveyev, B. I. 42
B+1

ORG: none

TITLE: Preparation of weldable sheets of SAP-1 alloy by coil rolling

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy
(Heat resistant and high-strength alloys), 238-253

TOPIC TAGS: sintered aluminum powder, hot rolling, cold rolling, sheet metal

ABSTRACT: The purpose of the work was to determine the feasibility of preparing thin sheets 0.6 to 3 mm thick of industrial dimensions (1000-1400 mm wide and 3500-7000 m long) from fusion-welded SAP-1 material (a sintered aluminum powder material) by coil rolling on existing industrial equipment, and also to study the mechanical properties and structure of hot- and cold-rolled sheets in relation to the conditions of deformation and annealing. It was found possible to produce such sheets by using a billet made by stamping on a vertical hydraulic press, and to weld them by fusion. Vacuum annealing can be replaced by long high-temperature annealing without vacuum for the purpose of adequately degassing the briquet and imparting weldable properties to the SAP-1 material. In order to obtain the maximum strength characteristics at high temperatures, the sheets should be produced only by hot rolling. If thin sheets cannot

Card 1/2

L 46950-66

ACC NR: AT6024936

be produced by hot rolling alone, the cold rolling should be carried out with a minimum degree of deformation. Orig. art. has: 6 figures and 3 tables.

SUB CODE: 13/ SUBM DATE: none

Card 2/2 a/s

ACC NR: AR7004873

SOURCE CODE: UR/0276/66/000/009/B042/B042

AUTHOR: Archakova, Z. N.; Kovrizhnykh, V. G.; Sandler, V. S.; Shvets, V. A.;
Lebedeva, N. S.

TITLE: The effects of heating conditions prior to hardening and the amount of cold deformation after hardening on the mechanical properties and structure of pressed sections of VAD23 alloy

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9B267

REF SOURCE: Sb. Alyumin. splavy. M., Metallurgiya, vyp. 4, 1966, 57-64

TOPIC TAGS: heat effect, cold hardening, mechanical property, cold deformation, alloy

ABSTRACT: Dependence was established between the structure, mechanical properties, and conditions of preheating of pressed sections of the VAD23 alloy prior to hardening. It was recommended that the hardening temperature be maintained within the 515--525 C range. The extrusion ratio is set at 15--25 for a section with a flange up to 10 mm thick. The straightening of sections, following

UDC: 621.785.6.001.5

Card 1/2

ACC NR: AR7004873

hardening by stretching with an amount of deformation of 1—4%, reduces the strength characteristics of the sections by 2—4 kg/mm²; change in the per unit elongation. No changes in mechanical properties occur following higher degrees of cold deformation. Repeated hardening does change the strength characteristics of the pressed sections from +1.7 to -11.6 kg/mm² and the per unit elongation from +0.9 to -4.5%. The negative effect of repeated hardening increases with increase in the extrusion ratio and the amount of cold deformation following primary and secondary hardening. Orig. art. has: 7 figures. [Translation of abstract] [AM]

SUB CODE: 11, 13/

Card 2/2

YANIN, I.A., mashinist elektrovoza; KOVRIZHNYKH, V.V., mashinist elektrovoza;
SHCHENOVICH, V.A., inzh.

How to check the operation of regenerative system. Elek. i tepl.
tiaga 4 no.10:7-8 0 '60. (MIRA 13:10)

1. Depo Zlatoust Yuzhno-Ural'skoy dorogi.
(Railroads--Brakes)

S/204/62/002/004/008/019
E075/E436

AUTHORS: Shatenshteyn, A.I., Yakovleva, Ye.A.,
Kovrizhnykh, Ye.A., Manochkina, P.N., Pravikova, N.A.

TITLE: Acidic properties of some monomers

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 507-511

TEXT: A method of deuterium exchange was used to determine the acidities of butadiene; 2-methylbutadiene-1,3; 2,3-dimethylbutadiene-1,3; hexadiene-2,4; 2,5-dimethylhexadiene-2,4 and α -methylstyrene. The experiments were conducted at 25°C with 0.05 N KNH_2 in liquid ND_3 . In all cases low molecular polymers were formed and separated from solution. It was found that H atoms in the methyl groups in allyl position in respect to double bonds exchange for D more rapidly than the H atoms next to double bonds. For α -methylstyrene in 0.02 N KNH_2 the hydrogen exchange proceeds rapidly, the rate constant K being about $1.2 \pm 0.1 \times 10^{-3} \text{sec}^{-1}$. This rate of H exchange is faster than that in the methyl group in propylene and a little slower than that in the methyl group in toluene. The main role in the polymerization of α -methylstyrene is played by the processes connected with proton


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Acidic properties of ...

S/204/62/002/004/008/019
EO75/E436

transfer, in contrast to the polymerization of styrene. This is confirmed by the high content of N (1.4%) in polystyrene compared with that in poly α -methylstyrene (0.16%). It is expected that similar differences in the mechanism of polymerization exist between methylated dienes and butadiene. There are 2 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L.Ya.Karpova
(Physico-Chemical Institute imeni L.Ya.Karpov)



Card 2/2

BARYSHNIKOV, F.A.; SOLOV'YEV, V.A.; KOVRIZHNYKH, Yu.P.

Interrelation between the petrographic and mineral composition and
the germanium content of some kinds of coal. Trudy Inst. gor. dela.
Sib. otd. AN SSSR no.3:252-265 '60. (MIRA 14:4)
(Coal--Analysis) (Germanium--Analysis)

ZAVADSKIY, E.A.; KOVRIZHNYKH, Yu.T.; FAKIDOV, I.G.

Galvanomagnetic effects in semiconductors with nonuniform
impurity distribution. Fiz. tver. tela 7 no. 12:3582-3587
D '65 (MIRA 19:1)

1. Institut fiziki metallov AN SSSR, Sverdlovsk.

ZAVADSKIY, E.A.; KOVRIZHNYKH, Yu.T.; FAKIDOV, I.G.

Photogalvanomagnetic effects in germanium in high magnetic fields.
Fiz. tver. tela 6 no.1:173-181 Ja '64. (MIRA 17:2)

1. Institut fiziki metallov AN SSSR, Sverdlovsk i Sverdlovskiy gosudarstvennyy pedagogicheskiy institut.

ZAVADSKIY, Z.A.; KOVRIZHNYKH, Yu.T.; FAKIDOV, I.G.

Hall constant in p-Ge as a function of the magnetic field intensity.
Zhur. eksp. i teor. fiz. 40 no.4:1229-1231 Ap '61. (MIRA 14:7)

1. Institut fiziki metallov AN SSSR.
(Hall effect) (Germanium--Magnetic properties)

12506

S/181/63/005/001/030/064
B102/B186

AUTHORS: Zavadskiy, E. A., Kovrizhnykh, Yu. T., and Fakidov, I. G.

TITLE: Negative photoconductivity of germanium in a magnetic field

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 194 - 200

TEXT: The germanium photoconductivity was measured in the constant field of an electromagnet as well as in an alternating field with a damping decrement of 4.0 and a frequency of 3 kc. In order to avoid intense quantum effects of the carriers, measurements at 20°K were made in fields of up to 14 koe, at 77°K up to 60 koe and at room temperature up to 200 koe. The samples were illuminated by a single pulse from an ИФК-120 (IFK-120) gas-discharge lamp. Photoconductivity was measured as described by E. A. Zavadskiy and I. G. Fakidov (FTT, 4, 1704, 1962). With three n-type samples and one p-type the following characteristics were measured: $\Delta\sigma_H/\sigma_H = f(H)$ at 77°K and at $\xi_T/\xi_C = 18.3, 10.6, 5.0$ and 2.0 ; $\Delta\sigma_H/\sigma_H = f(\xi_T/\xi_C)$ at 20°K and at $H = 0, 1.65, 3.5, 6.7, 12.4$, and 14.4 koe;

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Negative photoconductivity ...

S/181/63/005/001/030/064
B102/B186

$\Delta\sigma_H/\sigma_H = f(1/H^2)$ at 77°K and at $\varrho_T/\varrho_c = 4.9, 1.25, 1.4$ and 1.7; $(\Delta\sigma_H/\sigma_H)_\infty = f(\varrho_T/\varrho_c)$ at 77°K for an n-type and a p-type sample; $(\Delta p/n_o)_o = f(H^2)$ at 58 and 77°K. σ_H denotes the conductivity without illumination, ϱ_T and ϱ_c are the resistivities without and with illumination at $H = 0$; $(\Delta\sigma_H/\sigma_H)_\infty$ gives the saturation value (extrapolated to $H = \infty$); $(\Delta p/n_o)_o$ gives the position of the injection level. The results, showing that at high magnetic field strengths the photoconductivity is negative, are in good quantitative agreement with theory (Madelung, Z. Naturf., 8a, 791, 1953). The results correspond to impurity conductivity. For samples with mixed dark conductivity, negative photoconductivity can be observed only at higher field strengths. There are 6 figures and 1 table.

ASSOCIATION: Institut fiziki metallov AN SSSR, Sverdlovsk (Institute of the Physics of Metals AS USSR, Sverdlovsk)

SUBMITTED: July 26, 1962

Card 2/2

L 11145-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP6000858

SOURCE CODE: UR/0181/65/007/012/3582/3587

51

AUTHORS: Kovrizhnykh, Yu. T.; Fakidov, I. G.

ORG: Institute of Metal Physics AN SSSR, Sverdlovsk (Institut fiziki metallov AN SSSR)

21, 44, 55
TITLE: Galvanomagnetic effects in semiconductors with nonequilibrium impurity distribution

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3582-3587

TOPIC TAGS: galvanomagnetic effect, magnetoresistance, germanium, impurity conductivity

ABSTRACT: To study magnetoresistance, anisotropy, the authors measured the magnetoresistance of germanium in a strong magnetic field capable of distorting the carrier distribution in the semiconductor, and observed the presence of an additional voltage on the potential contacts. This voltage was proportional to the current and to the magnetic field intensity. To display the potential difference resulting from the gradient of the impurity concentration, the concentration of the sam-

Card 1/3

2

L 11745-66
ACC NR: AP6000858

0

ple was altered by doping in only a part of the sample. Half a single crystal of germanium with carrier density $n = 10 \times 10^{14} \text{ cm}^{-3}$ was doped in antimony vapor to a depth $\sim 0.1 \text{ mm}$ on each side (the sample thickness was 0.5 mm). Measurements of the voltage distribution along the sample showed an abrupt variation of the resistance from 46 to 0.02 ohm-cm . The results agreed equally with the hypothesis that the uneven distribution of the impurities bring about the potential difference. Measurement of the angular dependence of the change in voltage showed that the presence of impurity concentration gradients causes annular equalization currents to flow in the sample when it is placed in a magnetic field. These currents produce an additional voltage on the potential contacts. The magnitude of the additional component of the voltage on the potential contacts is determined by the impurity concentration gradient in the sample and can serve as a criterion for the concentration inhomogeneity in the sample. In the impurity concentration region, this additional voltage is proportional to the magnetic field intensity, to the current in the sample, and to the width of the sample. In the region of mixed conductivity, the relation between the voltage and the magnetic field intensity becomes

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L 14145-66

ACC NR: AP6000858

nonlinear in strong magnetic fields. To eliminate possible errors, the ratio of the length to the width of the sample must be increased and the values obtained for different polarities of the magnetic field must be averaged. Orig. art. has: 8 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 14Jun65/ OTH REF: 004

Card

FW
3/3

KOVRIZHSKO, N.M. (Kiyev)

Age histological characteristics of the chromaffin system in
man. Arkh.pat. 24 no.5:39-46 '62. (MIRA 15:5)

1. Iz kafedry patologicheskoy anatomii (zav. - zasluzhennyy de-
yatel' nauki prof. Ye.I. Chayka) Kiyevskogo ordena Trudovogo
Krasnogo Znameni meditsinskogo instituta (dir. - dotsent V.D.
Bratus').

(CHROMAFFIN SYSTEM--AGING)

Card 1/8

LEVINSON, M.S.; KOVROV, B.G.

Effect of ultrasonic waves on distilled water. Biokhimiia 24
no.3:535-538 My-Je '59. (MIRA 12:9)

1. Laboratory of Biophysics, Institute of Physics, Academy of
Sciences of the U.S.S.R., Krasnoyarsk.

(HEMOGLOBIN,

eff. of distilled water exposed to ultrasonics
(Rus))

(WATER,

eff. of distilled water exposed to ultrasonics
on hemoglobin (Rus))

(ULTRASONICS, eff.
same)

LEVINSON, M.S.; KOVROV, B.G.

Photoelectric investigations of the kinetics of oxyhemoglobin
splitting under the influence of alkalis and acids. Biofizika
5 no.1:28-33 '60. (MIRA 13:6)

1. Institut fiziki AN SSSR, Krasnoyarsk.
(HEMOGLOBIN chem.)

LEVINSON, M.S.; KOVROV, B.G.

Mechanism of oxidation of ultrasound. Izv.Sib.otd.AN SSSR no.12:67-
77 '60. (MIRA 14:2)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, g.Krasnoyarsk.
(Ultrasonic waves) (Oxidation)

KOVROV, B.G.

Properties of hemoglobin as a function of its age. Vop.biofiz.,
biokhim.i pat.erit. no.2:65-76 '61. (MIRA 16:3)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, laboratoriya
biofiziki, Krasnoyarsk.
(HEMOGLOBIN)

MAKAROV, V.P.; KOVROV, B.G.

Accumulation of methemoglobin in irradiated erythrocytes. Vop.
biofiz., biokhim. i pat. erit. no. 2: 125-128 '61. (MIRA 16:3)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, laboratoriya
biofiziki, Krasnoyarsk.

(ERYTHROCYTES) (RADIATION--PHYSIOLOGICAL EFFECT)
(HEMOGLOBIN)

KOVROV, B.G.; MAKAROV, V.P.

Decrease in the peroxidase activity of human hemoglobin in the erythrocytes with reduced osmotic resistance. Vop.biofiz., biokhim.i pat.erit. no.2:214-219 '61. (MIRA 16:3)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, Krasnoyarsk.
(HEMOGLOBIN) (PEROXIDASES) (ERYTHROCYTES) ,
(OSMOSIS)

KOVROV, B. G.

Dissertation defended for the degree of Candidate of Biological Sciences
at the Joint Scientific Council on Biological Sciences; Siberian Branch

"Heterogeneity of the Physicochemical Properties of Hemoglobin and Its
Relationship to Erythrocyte Age."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KOVROV, B.G.; MONCHADSKIY, A.S.

Possible use of polarized light for the attraction of insects.
Ent. oboz. 42 no.1:49-55 '63. (MIRA 16:8)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, Krasnoyarsk i
Zoologicheskij institut AN SSSR, Leningrad.
(Insect traps) (Polarization (Light))

ACCESSION NR: AT4037716

S/2865/64/003/000/0472/0476

AUTHOR: Gitel'zon, I. I.; Terskov, I. A.; Batov, V. A.; Baklanov, O. G.;
Kovrov, B. G.

TITLE: Automation of the cultivation of unicellular organisms for use in a
closed ecological system

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy* kosmicheskoy
biologii, v. 3, 1964, 472-476

TOPIC TAGS: closed ecological system, automation, algae cultivation, algae,
air regeneration, manned space flight

ABSTRACT: A self-regulating system designed for controlling algae culture media
is described. It consists of a cultivator for continuous culturing of algae in
a continuously recycled medium. A constant environment is maintained by automatic
regulation of the illumination, CO₂ concentration, temperature, and other factors.
Laboratory experiments have shown that the employment of optimum conditions in an
automatic system can result in a fivefold increase in the rate of biosynthesis of
the tested culture.

Card 1/2

ACCESSION NR: AT4037716

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PH, LS

NO REF SOV: 000

OTHER: 000

Card 2/2

TERSKOV, I.A.; GITEL'ZON, I.I.; SID'KO, F.Ya.; BELYANIN, V.N.; KOVROV, B.G.;
YEROSHIN, I.S.; BATOV, V.A.

Dense continuous cultivation of *Chlorella* in varying illumination.
Probl. kosm. biol. 4:683-686 '65. (MIRA 18:9)

L 13077-66 EWT(d)/EWT(1)/EWA(j)/I/EWA(b)-2 IJP(c) JK

ACC NR: AP5628917

SOURCE CODE: UR/0020/65/165/003/0692/0695

AUTHOR: Gitel'zon, I.I.; Kovrov, B.G.; Terskov, I.A.

ORG: none

TITLE: Mathematical description of the process of uninterrupted cultivation of water microorganisms

SOURCE: AN SSSR. Doklady, v. 165, no. 3, 1965, 692-695

TOPIC TAGS: microbiology, biologic ecology, mathematic method

ABSTRACT: Due to the increased use of uninterrupted cultivation of microorganisms, it became important to develop a strictly quantitative description of such processes. The mathematical approach proposed by numerous authors describes the process usually by the dependence of the growth rate and cell multiplication on external and internal parameters. The present article follows a different, so-called "population" approach, in which the object of the analysis is the cell population viewed as a whole. The continuous culture is defined as a process satisfying the equation

$$v_1 = v_2 \neq 0,$$

(1)

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UDC: 573.809.33

L 13077-66

ACC NR: AP5028917

where v_1 is the rate of transfer of the element with the nutrient medium into the reactor; v_2 is the total velocity of the discharge from the reactor of all the phases involved (cellular biomass, liquid, and gas). The continuity of the process is secured if Equation (1) is valid for each element of the nutrient medium. The author develops the complete theory for the case of static density cultivation, the mathematical condition of which is

$$dD / dt = 0, \quad (2)$$

where D is the biomass concentration in the microorganism suspension. The paper was presented by Academician A. A. Imshenetskiy, 9 Jan 65. Orig. art. has: 20 formulas.

SUB CODE: 06, 12 / SUBM DATE: 09Jan65 / ORIG REF: 002 / OTH REF: 007

Card 2/2

HW

L 11255-66 EWT(1)/FS(v)-3 SCTB DD/RD

ACC NR: AT6003908

SOURCE CODE: UR/2865/65/004/000/0683/0686

51
48

AUTHOR: Terskov, I. A.; Gimel'zon, I. I.; Sid'ko, F. Ya.; Belvanin, V. M.;
Kovrov, B. G.; Yeroshin, I. S.; Batov, V. A.

ORG: none

TITLE: Dense continuous cultivation of Chlorella under various illumination conditions

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 683-686

TOPIC TAGS: Chlorella, photosynthesis, biosynthesis, plant growth, light absorption, light biologic effect

ABSTRACT: Experiments were performed with a thermophylic strain of Chlorella vulgaris in order to determine optimal lighting conditions for high concentrations of cells during intensive, continuous cultivation. Concentrations of 2×10^9 , 3×10^9 , and 4×10^9 cells per cc were used. This is equivalent to 20, 30, and 40 g of the dry biomass per liter of suspension. The algae

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L 11255-66

ACC NR: AT6003908

3

were cultivated in a flat culture vessel with a working capacity of 1.4 liters, a dark capacity of 0.25 liters, and a total working surface of 0.6 m². During the course of the experiment the temperature was held at 36.5 ± 0.7° C, the pH was 7.35 ± 0.4, and the thickness of the layer was 5 mm. Air containing 5% CO₂ was bubbled through the culture medium.

Previous experiments had determined that in a culture containing 30 g of dry weight of biomass per liter, an optical path 0.5 mm long through the suspension absorbed about 90% of all photosynthetically active white-light radiation. This meant that bubbling played an important role in creating consecutive light and dark phases for each cell. The mm-thick layer of culture was equally illuminated from both sides by gas-discharge lamps (DRL-1000 and ND-2) which produced favorable illumination for photosynthesis. In the experiments, 6 levels of illumination intensity were used, ranging from 0.260 up to 1.202 cal/cm²/min. As a rule the light intensity was changed from minimum to maximum and then back to minimum. The duration of such a cycle was usually 4 to 5 hours. Deviations from the selected level of intensity did not exceed ± 4%. The duration of the experiments was 6 days.

Card 2/4

L 14255-66

ACC NR: AT6003908

The effect of various intensities of illumination on the growth of the algae was based on the increase in the weight of the biomass expressed in grams of dry substance per liter of suspension per diem. In all cases the intensity of production tended to increase with the intensity of illumination up to a certain point. After that, additional increases in illumination failed to bring about additional increases in productivity. The leveling-off point was reached at different light intensities, ranging from 0.361 cal/cm²/min for low-density cultures (20 g/liter) to 0.791 cal/cm²/min for high-density cultures (43 g/liter). It is interesting to note that the productivity for different densities was also most identical: ranging from 36—38 g of dry weight per liter of suspension per diem.

The almost identical maximum productivity of the various cultures may be explained by the fact that high concentrations of cells make the medium optically very dense. When the thickness of the culture layer is fixed, the average level of illumination of the cells becomes a function of surface illumination and culture density. The light falling on the cells, along with the productivity of individual cells, drops rapidly as culture density increases. It was found that the intensity of biosynthesis of cells at 20 g/liter is nearly

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L 07468-67 EWT(1) SCTB DD

ACC NR: AP6036273

SOURCE CODE: UR/0290/66/000/002/0003/0015

AUTHOR: Gitel'zon, I. I.; Kovrov, B. G.; Terskov, I. A.

ORG: Institute of Physics, Siberian Division, AN SSSR, Krasnoyarsk (Institut fiziki Sibirskogo otdeleniya AN SSSR)

TITLE: Characteristics of the process of continuous cultivation of unicellular algae

SOURCE: AN SSSR. Sibirskoye otdeleniye, Izvestiya. Seriya biologo-meditsinskikh nauk, no. 2, 1966, 3-15

TOPIC TAGS: plant physiology, algae, life support system, photosynthesis, plant metabolism, plant development

ABSTRACT: Equations reflecting the various quantitative characteristics of the continuous cultivation of unicellular algae are developed and rationalized. This comprehensive article is broken down into the following sections: 1) classification of cultivation processes; 2) fundamental equations for a continuous, stable-density culture; 3) change in the elementary composition of cells; 4) instability of biomass concentration during a stationary process; 5) the gaseous nutrition of algae; 6) water loss due to evaporation; 7) change in the volume of a suspension during cultivation; 8) accumulation of metabolites in a culture medium; 9) the quasi-continuous process. Orig. art. has: 43 formulas.

SUB CODE: 06/ SUBM DATE: 22Jan66/ ORIG REF: 001/ OTH REF: 008/ ATD PRESS: 5104
Card 1/1 UDC: 582.26:502

L 14255-66

ACC NR: AT6003908

three times as great as that of cells at 43 g/liter. Consequently, the total productivity of high-density cultures at high illumination can be increased only by increasing the surface area accepting the light. Orig. art. has 2 figures.

[ATD PRESS: 4091-F]

SUBJ CODE: 06 / SUBM DATE: none

FW
Card 4/4

L 13315-66

ACCESSION NR: AP5021591

UR/0286/65/000/013/0065/0065

AUTHORS: Kovrov, B. V.; Koochanovskiy, N. Ya.; Yesipov, Ye. I.; Tolyarenko, N. Ye. 9B

TITLE: Machine for continuous welding of polymer films. Class 39, No. 172474

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 65

TOPIC TAGS: polymer film

ABSTRACT: This Author Certificate presents a machine for continuous welding of polymer films. The machine consists of an endless metallic band put on a driving and a driven roller, a pressing roller, a cooler, and a stripping device (see Fig. 1 on the Enclosure). To simplify the machine design and to broaden its technological possibilities, the endless metallic band is in contact with leads connected to the outputs of a transformer secondary. Orig. art. has: 1 diagram.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo oborudovaniya (All-Union Scientific Research Institute of Electric Welding Equipment)

SUBMITTED: 15Jun64

ENCL: 01

SUB CODE: OC, MT

NO REF SOV: 000

OTHER: 000

Card 1/2

L 13315-66

ACCESSION NR: AP5021591

ENCLOSURE: 01

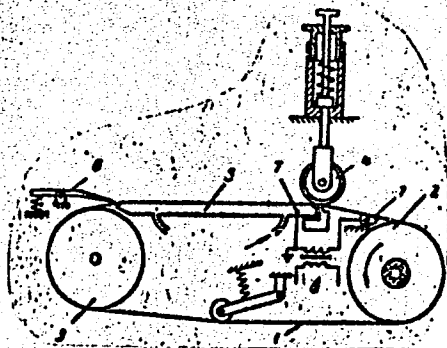


Figure 1:

- | | |
|--------------------------|---------------------|
| 1. endless metallic band | 5. cooler |
| 2. driven roller | 6. stripping device |
| 3. known roller | 7. feeder rod |
| 4. pressing roller | 8. transformer |

Card 2/2

AUTHORS: Rovrov, B.V. and Faygenbaum, D.S. (Engineers) 110-7-15/30

TITLE: A capacitor machine for contact spot welding, type MTK-2.
(Kondensatornaya mashina dlya kontaktnoy tochechnoy
svarki tipa MTK-2).

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the
Electrical Industry), Vol.28, No.7, 1957, pp.55-57 (USSR).

ABSTRACT: Contact welding of thin parts is becoming ever more
widely used in instrument manufacture. In some industries,
for instance, the manufacture of radio valves, it is the
only acceptable way of making connections. Its use could
also extend to other industries. In order to satisfy the
requirements of industry for capacitor spot welding
machines of low output the VNIESO developed automatic
capacitor spot welding machine type MTK-2. A.M.Mirkin
took a large part in the work. The machine is intended for
spot welding of parts of non-ferrous and ferrous metals and
alloys of thickness 0.1 + 0.1 mm to 0.3 + 0.3 mm. The
machine can also weld cross-wise joints on wires from
0.6 + 0.6 mm diameter to 1 + 1 mm diameter or of wires of
these diameters to sheet metal. Welding is effected by
energy storing capacitors. The capacitors discharge into
the primary winding of a step-down transformer to the

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A capacitor machine for contact spot welding, type MTK-2.
(Cont.) 110-7-15/30

secondary of which the welding circuit is connected. Technical data of the machine are tabulated. It is designed for 220-volt supply with a maximum charging current of 4 amps and a capacitor voltage of 400 V. The minimum and maximum capacitances are respectively 25 and 500 microfarads. The general arrangement of the machine is described and illustrated. The upper electrode can be controlled either electro-magnetically or by a foot-pedal. Electro-magnetic operation is used for automatic working. The control circuit of the machine carries out the following working cycle: the condensers are charged, the electrodes are moved together, the condensers are discharged through the primary winding of the transformer, pressure is removed and the electrodes are lifted. The rate of automatic operation may be from 20 to 90 cycles per minute. The cycle duration is determined by the electronic time relay. The rate of discharge can be controlled by altering the transformer ratio or the capacitance of the capacitor. Tests on the equipment show that it produces satisfactory welded joints between sheets of brass, bronze, nickel, constantan, nichrome, low-carbon steel and also wires of

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2/3

A capacitor machine for contact spot welding, type MTK--2.
(Cont.)

110-7-15/30

nickel, nichrome and constantan.

There are 2 figures.

ASSOCIATION: VNIIESO.

AVAILABLE:

Card 3/3

S/193/62/000/005/003/003
A004/A101

AUTHORS: Kovrov, B. V.; Mirkin, A. M.

TITLE: The MSHRP-1-2 (MSHRP-1-2) and MP-2 (MP-2) machines for welding plastic materials

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 5, 1962, 32-35

TEXT: In 1961 the Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-svarochnogo oborudovaniya (All-Union Scientific Research Institute of Electric Welding Equipment) VNIIESO has developed and manufactured a pilot model of the MSHRP-1-2 machine for welding polyethylene films from 40 + 40 to 120 + 120 μ thickness and a laboratory model of the MP-2 machine for welding polymeric films. The MP-2 machine has been designed by Engineer A. D. Dudnikov. The MSHRP-1-2 machine consists of a metal welding table on whose top surface the welding head is mounted. The electric assembly, pedal drive, with which the upper roll is lifted by 10 mm, and other machine units are located within the table. The heater supply voltage and, consequently, the heating temperature of the steel strip is adjustable, while a stepped regulation of the welding speed is provided for. A description of the machine operation is given. The MP-2 welder is

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S/193/62/000/005/003/003
A004/A101

The МШРП-1-2 (MShRP-1-2) and ...

intended for the straight seam welding of polyethylene, polyamide and other thermoplastic films up to 0.2 mm thickness by the thermal impulse method. The authors give a description of this plastic welder and present the following technical data: (the data of the MShRP-1-2 welder are mentioned in the first place, those of the MP-2 machine are put in brackets): Output in welding films of 60 + 60 μ thickness, m/min - up to 10 (-); seam width, mm - 4 (-); thickness of film being welded, mm - (up to 0.2); length of seam, mm - not limited for both models; maximum seam length per 1 cycle, mm - (300); voltage of supply network, v - 220 (220); input power, w - 600 (700); welding temperature regulation range, °C 100 - 250 (-); welding speed regulation range, m/min - 2-16 (-); regulation range of the roll compression force, kg - 0.5 - 4 (-); welding time regulation range, sec. - 4 (0.2 - 4); machine overall dimensions, mm: length - 775 (510), width - 500 (710), height - 1,095 (1,000); weight, kg - 70 (40). There are 2 figures.

Card 2/2

KOVROV, B.V.; MIRKIN, A.M.

The MShR P-1-2 and MP-2 plastics welding machines. Biul.tekh.-
ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform. no.5:32-35
'62. (MIRA 15:7)
(Plastics--Welding--Equipment and supplies)

KOVROV, Nikolay Ivanovich; KUDRYAVTSEV, S.P., red.

[Finance of collective and state farms] Finansovoe kho-
ziaistvo kolkhov i sovkhov. Moskva, Mysl', 1964. 93 p.
(MIRA 17:12)

KOVROV, P.A., inzh. (Leningrad)

Potentialities for a better routing of lumber shipments. Zhel.
dor.transp. 42 no.2:41-44 F '60. (MIRA 13:5)
(Lumber--Transportation)

CONFIDENTIAL

Material for use instead of camouflage. Also, trans. LIGHT no.219:
(MIRL 18:9)

KOVROV, P.A., inzh.

Determining the efficiency of shippers' special destination trains.
Sbor.trud.LIIZHT no.189:48-74 '62. (MIRA 16:7)
(Railroads--Making up trains)

KOVROV, P.A., inzh.

Potentials of the classified routing of lumber shipments. Sbor.-
trud.LIIZHT no.189:95-113 '62. (MIRA 16:7)
(Lumber--Transportation) (Railroads--Management)

KOVROV, P.A., inzh. (Leningrad)

Advantages of routing at the departure point. Zhel.dor.transp.
43 no.5:52-54 My '61. (MIRA 14:4)
(Railroads--Traffic)

KOVROV, Ya.G.

Enlarged session of the Presidium of the Academy of Medical Sciences
of the U.S.S.R. in Dnepropetrovsk. Sov. zdrav. 13 no.5:59 S-O '54.
(MLRA 7:12)

(DNEPROPETROVSK--MEDICINE--SOCIETIES)

~~KONROVA~~ A.M., mladshiy nauchnyy sotrudnik

Some characteristics of temperature variations in the free
atmosphere over Antarctica. Inform. biul. Sov. antark. eksp.
no.4:27-32 '59. (MIRA 12:11)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Antarctic regions--Atmospheric temperature)

KOVROVA, A.M., mladshiy nauchnyy sotrudnik

Distribution of the vertical gradient of the wind velocity at high altitudes at Mirnyy. Inform.biul. Sov.antark.eks no.43:25-29 '63.

(MIRA 17:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

L 38150-66 EWT(1)/FCC GW

ACC NR: AT5012778

(N)

SOURCE CODE: UR/2561/65/000/021/0042/0048

AUTHOR: Kovrova, A. M.

ORG: none

TITLE: Some characteristics of turbulent exchange in the Arctic

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Problemy Arktiki i Antarktiki, no. 21, 1965, 42-48

TOPIC TAGS: turbulent flow, atmospheric turbulence, air flow

ABSTRACT: These characteristics were investigated during 1957, 1958, and 1963 by recording the overloading of the center of gravity of an IL-14 airplane in flight. An MP-66 resistive transducer located along the line of the center of gravity was used for measuring the overloads. The overload observations were carried out with the aircraft flying horizontally in a cloud area. The structure of turbulent zones was described in terms of τ , L , K , where τ is the mean time of preservation of the same sign of overloading, $L = V\tau$ is the horizontal distance along which the same sign is preserved, V is the air speed of an airplane expressed in m/sec, K is the coefficient of turbulence equal $\frac{\Delta n}{b_0 \Delta \rho}$; b_0 is the coefficient of the airplane's dynamic characteristics, Δn is the change in overloading, and Δ is a function of air density. The data show that the turbulence coefficient varies from 50-150 m²/sec and its maximum

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UDC: 551.511.6(98)

L 38150-66

ACC NR: AT6012778

repetition coincides with 51-100 m²/sec (36%) and 101-150 m²/sec (33%). The maximum value of the coefficient of turbulence (213 m²/sec) was observed on August 17, 1963. The vertical velocity of an air flow is one of the characteristics of a turbulent exchange. Orig. art. has: several formulas, 1 figure, 4 tables.

SUB CODE: 04,01/ SUBM DATE: 01Feb65/ ORIG REF: 005/ ~~005-213-1000~~

Card 2/2/

L 12452-65 ENT(1)/FCB ASD(f)-2,ESD(f) CN
ACCESSION NRI AT4046490

8/3116/63/253/000/0172/0177

AUTHOR: KOVENOV, A. M.

TITLE: Turbulence characteristics of the free atmosphere in the western sector of the Soviet Arctic

SOURCE: Leningrad, Arktika, kiy i arkticheskiy nauchno-issledovatel'skiy institut, Trudy, v. 25, 1961. Sbornik statey, posvyashchennykh pamyati V. V. Prolova; voprosy gidrometeorologii polynykh oblastey (Collection of articles in memory of V. V. Prolov; problems in the hydrometeorology of the polar regions), 172-177

TOPIC TAGS: atmospheric turbulence, wind shear,
vertical temperature gradient

ABSTRACT: The probability of the occurrence of strong atmospheric turbulence over the western part of the Soviet Arctic has been investigated from three Soviet polar stations for the month of January (1958-1960) and for April, July, and August (1958-1959). The results of 1400 radiosonde measurements of temperature and wind made at

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